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ARROWHEAD

COMBAT DEVELOPMENTS COMMAND

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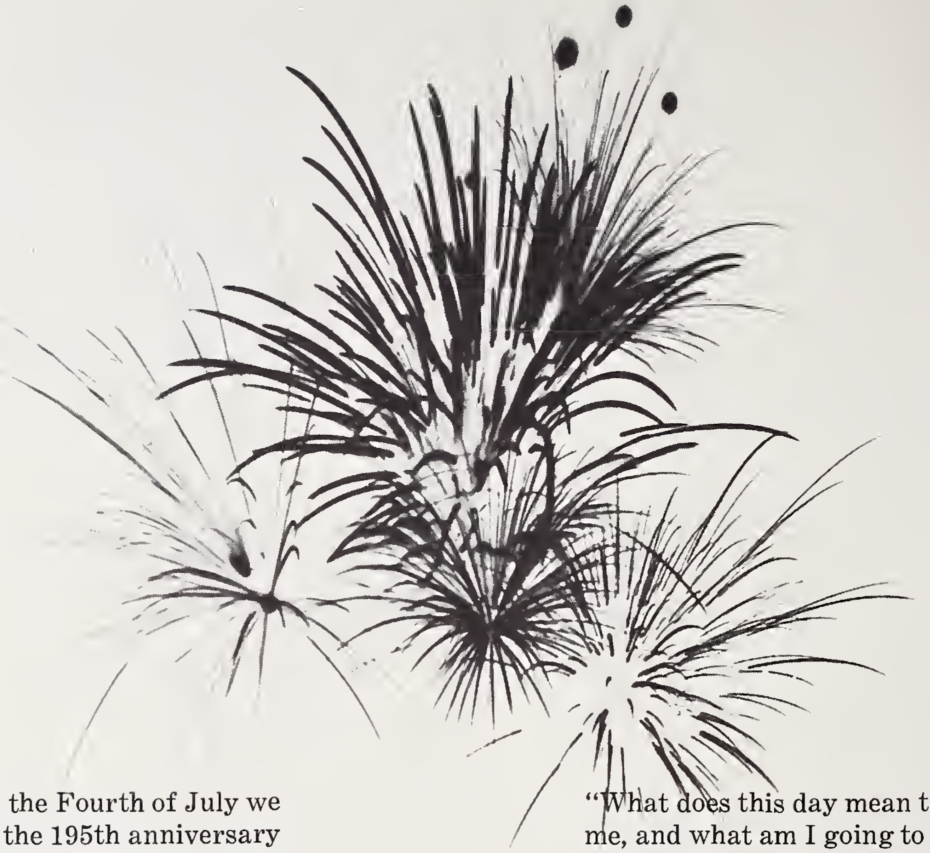

On the Fourth of July we celebrate the 195th anniversary of the birth of this nation. We are many years away in time from that historical day, but our understanding and love of freedom has not diminished. In ten generations we have grown and matured as a people by a remarkable combination of two fundamental concepts: individual freedom and collective responsibility. We announced our freedom in the Declaration of Independence and we successfully joined the ideas of freedom and responsibility in the Constitution of the United States.

Independence Day is a time to celebrate the birth of our country, but it is also a time to review our own responsibilities as citizens. On this Fourth of July, take time to ask yourself, "What does this day mean to me, and what am I going to do about it?"

Will your home be flying the American flag on that day, displaying your love of country? Will you be talking to your children about the meaning of freedom? Will you be reviewing for yourself the history of this nation, and resolving to live up to the ideals of the Declaration of Independence and the Constitution?

Think about the American way of life on Independence Day—and practice your responsibilities as an American.

Fly The Flag Proudly!

John Norton

John Norton
Lieutenant General, U.S. Army
Commanding

D101.71:29

2

7

14

17

18

27

ARROWHEAD

COMBAT DEVELOPMENTS COMMAND

July 1971 No. 29

ARTICLES

2 Personnel Offensive: Probing Human Values

7 After More Than A Decade Of Airmobility . . . Where Does Army Aviation Go From Here?

12 I.D.C.S. (Integrated Development Control System)

14 BAHT: CDCEC Tests Air Cavalry Combat Force Mix Concepts

17 The Road To A Zero Draft

18 TRI-CAP: New Challenges For New Leaders

27 The TOE And You—Or, Let's Get Organized

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DOCUMENTS
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REGULAR FEATURES

Inside Front Cover Commander's Call

21 For God and Country

23 Spot Reports

Inside Back Cover The Forum

ABOUT THE COVER: This month's cover depicts, we believe, the essense of the Fourth of July spirit. The author of the quotation, Daniel Webster, also made another memorable utterance—"God grants liberty only to those who love it and are always ready to guard and defend it." It, too, deserves remembrance in these troubled times.

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PERSONNEL OFFENSIVE: PROBING HUMAN VALUES

by Col. Gerald L. Overstreet

A chaplain explains his job to new recruits (opposite page). Says Colonel Overstreet: "We must find new and effective ways to increase the motivation and utilization of every man." This includes, he says, "the relationship of the soldier to his job" (below).

"For want of a shoe, a horse was lost. For want of a horse, a rider was lost. For want of a rider, a battle was lost."

Where was the blacksmith? Perhaps he was fed up with the "establishment"; or maybe there was a breakdown in leadership and management.

When George Herbert wrote those words in *Jacula Prudentum* in 1640, it was as evident then as it is today that man is the most vital part of any army. It was also evident then as now that armies concentrate on attaining maximum use of their equipment (or horses) rather than on the full utilization of the man.

How can the Army attain maximum use of its most valuable resource—the individual soldier? To answer this question, or at least to start in the right direction, is the challenge being undertaken by the Combat Developments Command Personnel and Administrative Services Agency (PASA) at Ft. Benjamin Harrison, Ind.

A major study effort, entitled the "Personnel Offensive," was approved by the Department of the Army Study Advisory Committee in May 1970 as a part of the DCSPER (Deputy Chief of Staff for Personnel) priority study—The American Soldier in the 70s. In addition to the Personnel Offensive, The American Soldier in the 70s will include two substudies under contract to the Research Analysis Corporation (RAC).

The first of these is a study and analysis of the "Value Conflicts Between Civil and Military Institutions." It will be a study of how new men are handled, their reaction to military service and their subsequent influence, either by word or behavior, on the attitudes of those who have not yet entered the service.

The second substudy under contract to RAC is the "Impact of Dissident Elements and Minority Groups within the Army on the Enforcement of Discipline, Law and Order." In this study, DCSPER is seeking a systematic, thorough statement of the problems, present and anticipated, relating to dissidents and minority groups.

DCSPER is also looking for new techniques for identifying and handling each type of situation, suggestions for training military police in these techniques and, finally, recommendations for administrative procedures to rapidly process dissidents who should be discharged.

It is readily apparent, even from these brief descriptions, that the recommendations of these two RAC studies can have a direct effect on both our personnel management and administrative procedures.

The Personnel Offensive is an in-house study being conducted by PASA, under the guidance of Colonel Lester J. Evans, AGC, Chief, Doctrine Division. It is much more comprehensive in scope than either of the two RAC studies and will incorporate the RAC findings in its final recommendations.

The term "Personnel Offensive" is basically a psychological title for emphasis—to convey the thought and impetus that we must take the initiative to putting man ahead of the machine. We must find new and effective ways to increase the motivation and utilization of every man.

In January 1969, General Westmoreland stressed 4 Ms—mission, modernization, management and motivation. The Personnel Offensive is aimed at increasing effectiveness in each of these areas. Adding impetus and urgency to this task is the decision of the President to strive for a zero-draft, Modern Volunteer Army, by July 1973.

Colonel Gerald L. Overstreet is the Commanding Officer, PASA, Ft. Benjamin Harrison, Ind.

So that new recruits (below) may more readily adjust to Army life, the Personnel Offensive study is seeking parallels in occupational benefits found in civilian and military life.

"In Essence, We Cannot Take The New Soldier For Granted"

The ultimate goal of the Personnel Offensive is to conduct a comprehensive and all-encompassing study of the relationship of the soldier to his job, and an examination of all administrative and personnel policies, systems and procedures which affect those relationships. In Phase I of the Personnel Offensive, to be completed by 1 October 1971, we are seeking answers to four questions which are aimed directly at creating a better atmosphere for attaining a volunteer army:

- What changing attitudinal or behavioral characteristics of military entrants forecast a need for change in Army leadership techniques or personnel policies?
- In which areas and to what extent should Army leadership techniques and personnel and administrative policies and doctrine be modified to address these changing personal and societal values?
- What types of management decisions directly affect those individual attitudes toward the Army, and at what levels are these decisions made?
- What changes in the decision level could be made to more effectively address changing personal and societal values to enhance the command function?

In essence, we cannot take the new soldier for granted—someone to be rolled, pushed, shoved—yes, even possibly spindled and multilated into the World War II or Korean era mold. Today's young soldier (and over 75% of the enlisted men are under age 24) has different values, ideals, abilities and outlook than his World War II or Korean War counterpart.

If we are to have an effective and efficient fighting force, attracting and retaining the high caliber of men required, the first order of business is to determine how today's young man can best be motivated, led and utilized.

This is not an easy task for, unlike machines, the young man is vibrant and ever changing. His attitudes and values of yesterday may not necessarily be his attitudes and values of tomorrow. It is vital that we know how to best influence the behavior of these men so that the mission of the Army can be accomplished effectively under all conditions.

Many personnel studies have been made by various service agencies and by civilian firms; however, most of these studies have addressed the material or tangible factors—pay, living conditions, medical care, PX, commissary, dependent schools, working hours. Upon close analysis, few if any of these factors that bear upon job satisfactions stems from challenge, purpose, accomplishment and recognition.

In arriving at answers to the four questions, it is necessary to examine not only the job dissatisfiers, but also the job satisfiers. It is in this latter area that little has been analyzed or written—theories, yes; but practical guidance, no. The young squad leader, platoon leader, or company commander is faced with many problems and situations with little experience, policy, or guidance to assist him. The challenge, purpose, accomplishment and recognition must be provided by these young leaders. Under ideal conditions and with thorough training the task would be difficult enough, but the job can well be impossible when job dissatisfiers form at least psychological, if not physical, obstacles for the commander.

In developing answers to these four questions, PASA is looking and closely analyzing every factor which influences the behavior of the young men of today. The purpose of this analysis is an attempt to compare those factors which have a bearing on attitudes,

"We Can't Afford To Fail For Lack Of A Blacksmith"

traits, or conditions which affect the image the young soldier has of the Army, so as to identify or isolate those factors where a variance or contradiction exists.

A comparison of each factor in both the civilian and military environments will be made as well as change which has occurred in each factor in each environment during the past 20 years. Hopefully, this analysis will highlight where wide, or at least significant, variances exist. Military policies, procedures and leadership and management techniques will be studied for possible corrective measures to eliminate or reduce conflicts and gaps.

As most of us are aware, many of these factors on the military side are greatly influenced or dictated by custom and tradition and have not kept par with the changing values and attitudes brought into the service by the young soldier.

A preliminary list developed by the PASA Personnel Offensive study group identified 34 behavioral influence factors to be analyzed. These factors stem from four general categories—individual, group, occupational and environmental.

The first category is concerned with the characteristics of the individual, the freedoms and restrictions he is accustomed to in the way of personal behavior patterns: the interests he has, how he spends his leisure time, the responsibilities and commitments he lives up to.

In category two we assess the individual as a group member—the composition of roles and norms of a group as they impact on the attitudes and behavior of the individual both as an individual and as a member of a group. Groups to be considered include both formal (family, school, political party, religious institution) and informal (age, sex, race, social strata).

Category three compares occupational benefits found by an individual in civilian status with those in a comparable skill and position in the military. Here, such factors as hours, conditions, recognition, security, responsibility, job options, etc., come under consideration.

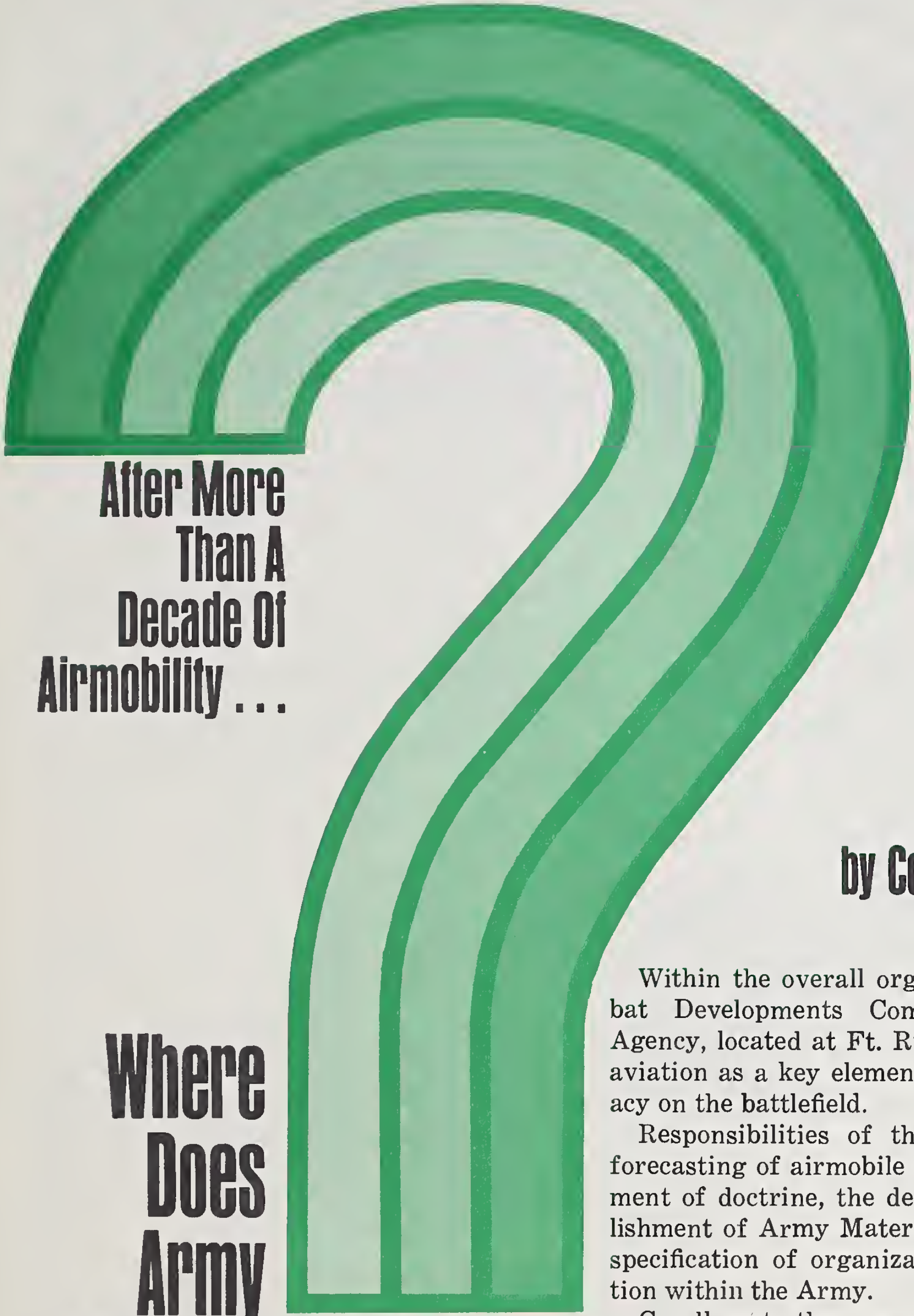
The fourth category of environmental influence is designed to accommodate those universal factors which affect the other categories, such as technological advances, radio and TV, population density and movement, affluency. In a sense they represent a national trend of events.

The search for meaningful and valid data is now underway. Every available statistic, prior studies, surveys, articles, as well as the professional opinions of knowledgeable people, both military and civilian, young and old, are being sought.

It is relatively easy to obtain voluminous data on that small group of outspoken young Americans who are constantly in the news with their vocal outbursts, demonstrations and reactionary demands. These do not constitute the vast majority of young Americans and obviously are not of the high and stable quality required of a volunteer force. What must be identified are those changing personal and social values found in stable and responsible young men and women which reflect an evolutionary social structure to meet the needs of today and tomorrow.

A volunteer army must be as vibrant and responsive to change as the young men and women who comprise it. The question is not whether the Army should accommodate these changes in customs and values, but rather *how* the Army can capitalize on these changes to better accomplish its mission and to be capable at all times of meeting any demand placed upon it.

We can't afford to fail for lack of a blacksmith.



After More Than A Decade Of Airmobility . . . Where Does Army Aviation Go From Here

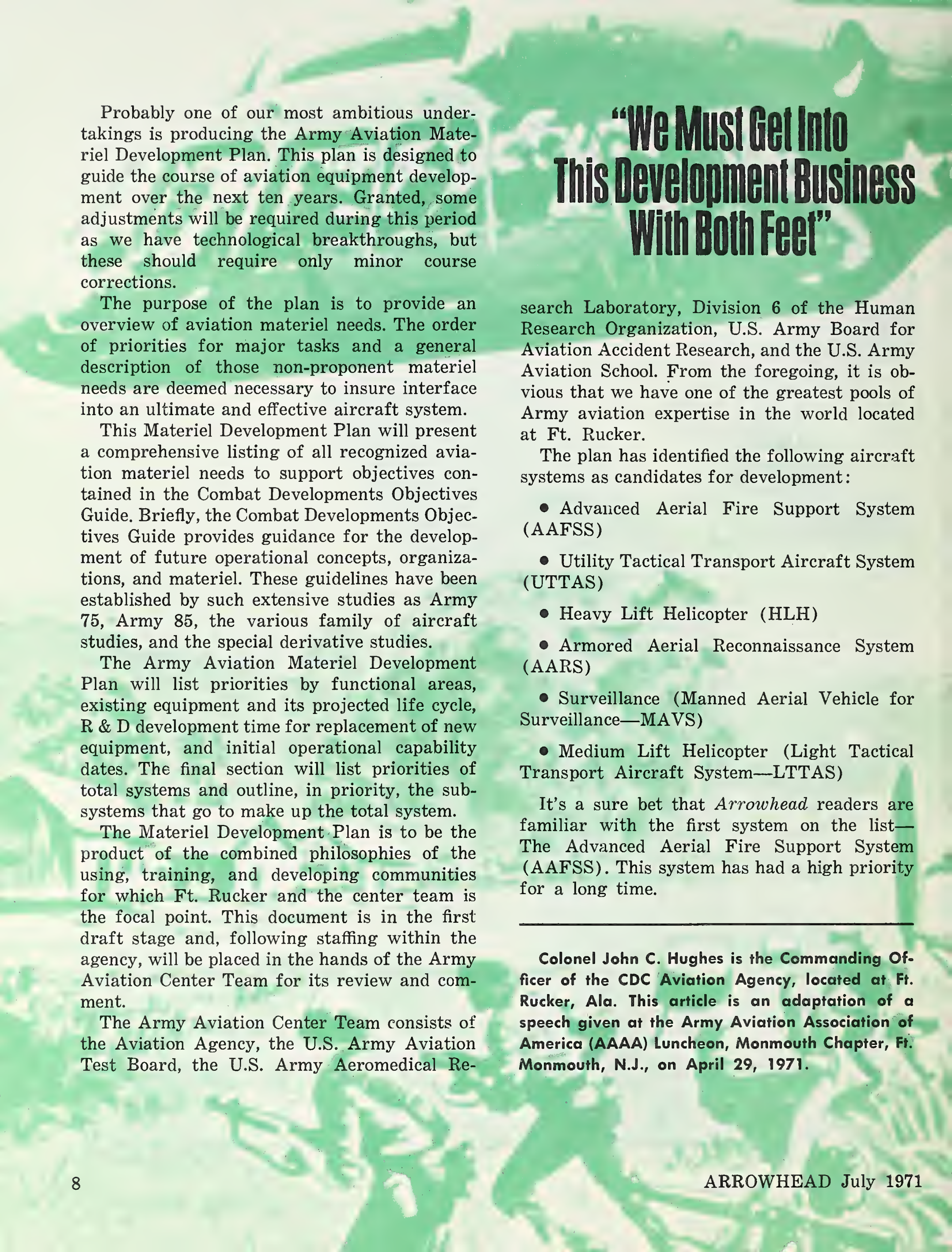
by Col. John C. Hughes

Within the overall organization of the Combat Developments Command, the Aviation Agency, located at Ft. Rucker, Ala., represents aviation as a key element in retaining supremacy on the battlefield.

Responsibilities of the agency include the forecasting of airmobile requirements, development of doctrine, the definition and the establishment of Army Materiel Objectives, and the specification of organizational needs for aviation within the Army.

Corollary to these responsibilities, which are oriented in the future, is the function of developing plans and programs, which will permit an orderly transition from the present to the future.

Since we are the user's representative—your representative—in the development of aviation materiel, it is essential that we get into this development business with both feet. That is exactly what we are doing.



"We Must Get Into This Development Business With Both Feet"

Probably one of our most ambitious undertakings is producing the Army Aviation Materiel Development Plan. This plan is designed to guide the course of aviation equipment development over the next ten years. Granted, some adjustments will be required during this period as we have technological breakthroughs, but these should require only minor course corrections.

The purpose of the plan is to provide an overview of aviation materiel needs. The order of priorities for major tasks and a general description of those non-proponent materiel needs are deemed necessary to insure interface into an ultimate and effective aircraft system.

This Materiel Development Plan will present a comprehensive listing of all recognized aviation materiel needs to support objectives contained in the Combat Developments Objectives Guide. Briefly, the Combat Developments Objectives Guide provides guidance for the development of future operational concepts, organizations, and materiel. These guidelines have been established by such extensive studies as Army 75, Army 85, the various family of aircraft studies, and the special derivative studies.

The Army Aviation Materiel Development Plan will list priorities by functional areas, existing equipment and its projected life cycle, R & D development time for replacement of new equipment, and initial operational capability dates. The final section will list priorities of total systems and outline, in priority, the subsystems that go to make up the total system.

The Materiel Development Plan is to be the product of the combined philosophies of the using, training, and developing communities for which Ft. Rucker and the center team is the focal point. This document is in the first draft stage and, following staffing within the agency, will be placed in the hands of the Army Aviation Center Team for its review and comment.

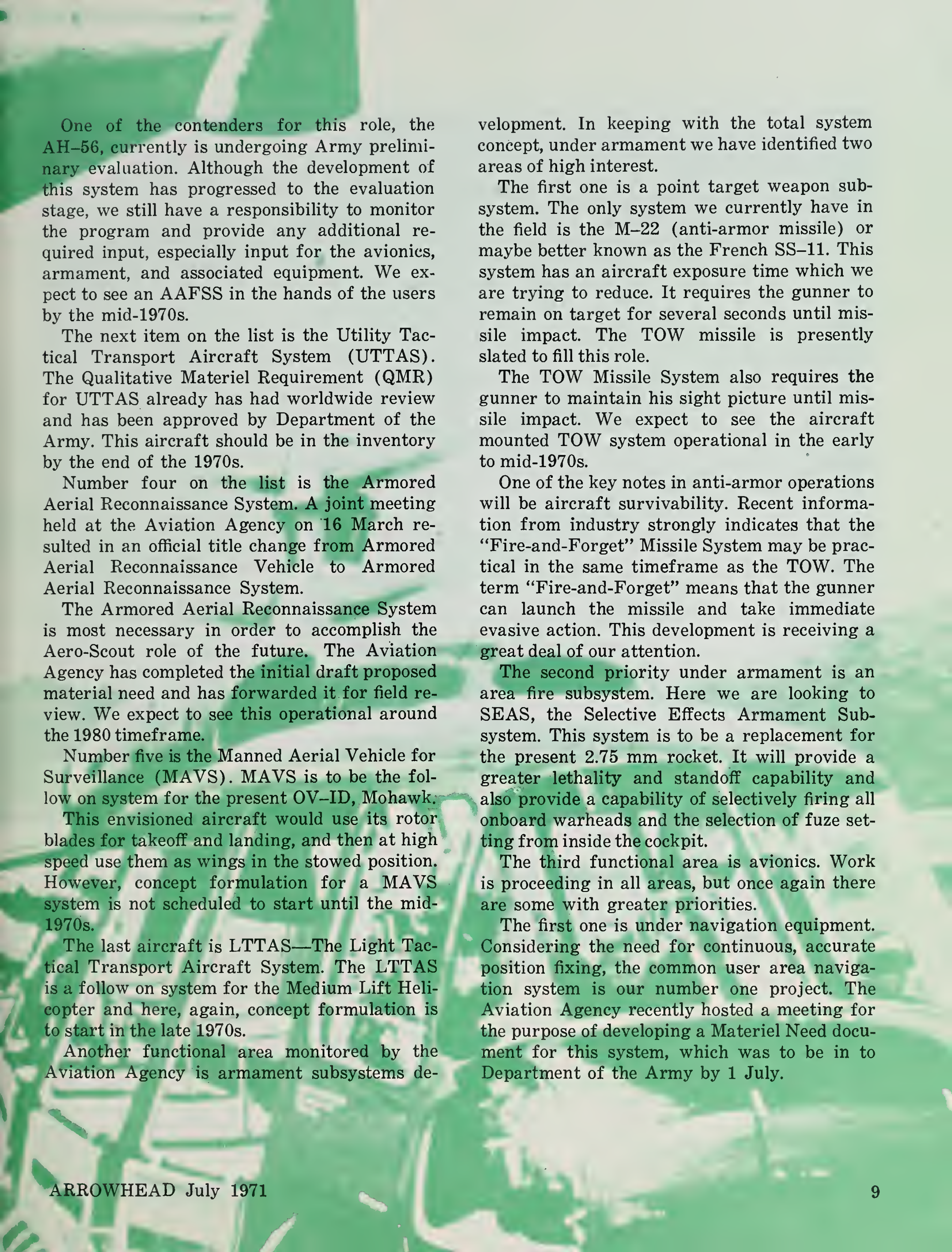
The Army Aviation Center Team consists of the Aviation Agency, the U.S. Army Aviation Test Board, the U.S. Army Aeromedical Research Laboratory, Division 6 of the Human Research Organization, U.S. Army Board for Aviation Accident Research, and the U.S. Army Aviation School. From the foregoing, it is obvious that we have one of the greatest pools of Army aviation expertise in the world located at Ft. Rucker.

The plan has identified the following aircraft systems as candidates for development:

- Advanced Aerial Fire Support System (AAFSS)
- Utility Tactical Transport Aircraft System (UTTAS)
- Heavy Lift Helicopter (HLH)
- Armored Aerial Reconnaissance System (AARS)
- Surveillance (Manned Aerial Vehicle for Surveillance—MAVS)
- Medium Lift Helicopter (Light Tactical Transport Aircraft System—LTTAS)

It's a sure bet that *Arrowhead* readers are familiar with the first system on the list—The Advanced Aerial Fire Support System (AAFSS). This system has had a high priority for a long time.

Colonel John C. Hughes is the Commanding Officer of the CDC Aviation Agency, located at Ft. Rucker, Ala. This article is an adaptation of a speech given at the Army Aviation Association of America (AAAA) Luncheon, Monmouth Chapter, Ft. Monmouth, N.J., on April 29, 1971.



One of the contenders for this role, the AH–56, currently is undergoing Army preliminary evaluation. Although the development of this system has progressed to the evaluation stage, we still have a responsibility to monitor the program and provide any additional required input, especially input for the avionics, armament, and associated equipment. We expect to see an AAFSS in the hands of the users by the mid-1970s.

The next item on the list is the Utility Tactical Transport Aircraft System (UTTAS). The Qualitative Materiel Requirement (QMR) for UTTAS already has had worldwide review and has been approved by Department of the Army. This aircraft should be in the inventory by the end of the 1970s.

Number four on the list is the Armored Aerial Reconnaissance System. A joint meeting held at the Aviation Agency on 16 March resulted in an official title change from Armored Aerial Reconnaissance Vehicle to Armored Aerial Reconnaissance System.

The Armored Aerial Reconnaissance System is most necessary in order to accomplish the Aero-Scout role of the future. The Aviation Agency has completed the initial draft proposed material need and has forwarded it for field review. We expect to see this operational around the 1980 timeframe.

Number five is the Manned Aerial Vehicle for Surveillance (MAVS). MAVS is to be the follow on system for the present OV–ID, Mohawk.

This envisioned aircraft would use its rotor blades for takeoff and landing, and then at high speed use them as wings in the stowed position. However, concept formulation for a MAVS system is not scheduled to start until the mid-1970s.

The last aircraft is LTTAS—The Light Tactical Transport Aircraft System. The LTTAS is a follow on system for the Medium Lift Helicopter and here, again, concept formulation is to start in the late 1970s.

Another functional area monitored by the Aviation Agency is armament subsystems development. In keeping with the total system concept, under armament we have identified two areas of high interest.

The first one is a point target weapon subsystem. The only system we currently have in the field is the M–22 (anti-armor missile) or maybe better known as the French SS–11. This system has an aircraft exposure time which we are trying to reduce. It requires the gunner to remain on target for several seconds until missile impact. The TOW missile is presently slated to fill this role.

The TOW Missile System also requires the gunner to maintain his sight picture until missile impact. We expect to see the aircraft mounted TOW system operational in the early to mid-1970s.

One of the key notes in anti-armor operations will be aircraft survivability. Recent information from industry strongly indicates that the "Fire-and-Forget" Missile System may be practical in the same timeframe as the TOW. The term "Fire-and-Forget" means that the gunner can launch the missile and take immediate evasive action. This development is receiving a great deal of our attention.

The second priority under armament is an area fire subsystem. Here we are looking to SEAS, the Selective Effects Armament Subsystem. This system is to be a replacement for the present 2.75 mm rocket. It will provide a greater lethality and standoff capability and also provide a capability of selectively firing all onboard warheads and the selection of fuze setting from inside the cockpit.

The third functional area is avionics. Work is proceeding in all areas, but once again there are some with greater priorities.

The first one is under navigation equipment. Considering the need for continuous, accurate position fixing, the common user area navigation system is our number one project. The Aviation Agency recently hosted a meeting for the purpose of developing a Materiel Need document for this system, which was to be in to Department of the Army by 1 July.

"One Of The Keynotes In Anti-Armor Operations Is Aircraft Survivability"

The other top project in avionics is the Air Traffic Management System (ATMS). Extensive studies have concluded that in any future conflict the survivability of aircraft and the maximum utilization of high dollar cost equipment will require an efficient management system. The Aviation Agency has been directed to have a Materiel Need document for this system into Department of the Army 1 July also.

The last functional area is Associated Aviation Equipment. Here we find ground support equipment, life support equipment, and miscellaneous equipment. "Miscellaneous" is for those items that do not readily fit into any other category.

As with all the functional areas, under associated equipment there are many items of con-

The Aviation Agency has marked six aircraft systems as candidates for its Army Aviation Materiel Development Plan, including the Heavy Lift Helicopter (page 7), the Utility Tactical Transport Aircraft System (pages 8 and 9), and the Armored Aerial Reconnaissance System (opposite page). The AH-56 (above) is currently being evaluated by the Army as a possible contender for the Advanced Aerial Fire Support System, another of the Army Aviation Materiel Development Plan's candidates.

tinued high interest. But there is one item that has a greater magnitude of importance. The Army urgently needs an improved Forward Area Refueling System in the same time frame as the AAFSS.

The existing system has two 500-gallon bladders, a 100-gallon per minute pump and a 100-gallon per minute filter, with two outlet nozzles.

This system is felt to be inadequate for both present and future operations. The Aviation Agency is monitoring this system development closely and is extremely interested in seeing that an adequate system is developed.

The future and flying has always been a mystery to man, but the Aviation Agency is doing its part in trying to provide the solution to both parts of that mystery.

IDCS

(Integrated Development Control System)

"Nearly all of our staff and administrative actions within a division—a command of some twenty to twenty-five thousand personnel with its attached units—are now done manually. This would probably amaze a modern business executive of a similar size operation because he simply couldn't afford the manpower for a manual staff and administrative system. The fact of the matter is that neither can the Army either in war or peacetime. The needed technology is just now becoming available to make these functions more efficient.

"The Army expects in the next few years to take full advantage of the advances in modern communications, automation, and advanced management procedures in order to digest and handle efficiently the information that moves within the combat systems. We call this approach the integrated battlefield control system or 'IBCS' concept."

Lieutenant General John Norton's testimony to the Preparedness Sub-Committee of the Senate Armed Services Committee, 24 November, 1970.

Combat Developments Command (CDC) is applying this same thinking to the way it conducts combat developments business.

The decision and management problem in CDC is complicated—perhaps as complicated as that faced by a major field commander.

Right now the command is working on more than 1,700 actions. Each involves, on an average, hundreds of man-days effort and thousands of dollars of support. Insuring that the best qualified people throughout the command work on the most important actions has become a major management challenge.

Each task also involves directives, preliminary reports, review actions, and scores of other coordination correspondence—eventually adding up to more than 10,000 documents a year passing between the major commands within CDC. Insuring that the most important of these documents receive priority command and staff action is a management task of immense proportions.

The new CDC management concept addresses these problems. Its thrust, in brief, amounts to:

* Identifying a limited number of high priority objectives which are called the COMMAND PRIORITY OBJECTIVES (CPO).

* Consolidating Command direction on work in support of the Command Priority Objectives in a series of "Master Plans," which are called "COMMAND GUIDANCE MEMORANDA" (CGMs).

* Monitoring and reviewing the more significant actions, primarily when these actions reach an important critical point.

This March, in a letter to the command, General Norton identified 14 CPO for 1972. These covered TRI-CAP, the Air Cav Combat Brigade and the Integrated Battlefield Control System (IBCS), to name a few major CDC projects. Since then, a fifteenth objective has been added – Personnel.

Preparation of Command Guidance Memoranda (CGM) also is underway. The first draft CGM was issued on 1 June 1971. It deals with CDC work on the IBCS program and:

- Identifies which specific problems are being addressed in the IBCS program.
- Indicates what must be done toward finding a solution—will the issue be studied or subjected to field experimentation and evaluation? Or, can the command move directly to a solution—new techniques which can be detailed in doctrinal literature, new organizations (TOE), or definitive materiel requirement statements?
- Specifies in general terms what CDC resources in man-years and contract dollars will be allocated to these combat development activities.
- Indicates the key suspense dates to Department of Army and other Army commands.

Responsibility for implementing the program outlined in the IBCS Memorandum has been assigned to the Intelligence and Control Systems Group at Ft. Belvoir, Va. This group has the job of translating the CGM into specific task directives for its agencies as well as all other CDC elements working on IBCS actions.

Other CGMs are in preparation now for Intelligence/STANO; Tank/Anti-tank; Communications; and Airmobility. In each case the CGM is being prepared by CDC headquarters (Deputy Chief of Staff/Operations) with assistance from the experts in the groups and agencies. As with the IBCS program, overall responsibility for implementing the program will be assigned to the group with the preponderance of the action.

Work also is underway to identify candidate actions for the SIGNIFICANT ACTION LIST (SAL). From 100 to 200 actions will be on the SAL once it is finalized. The list will, however, be dynamic, with actions added or deleted as

continued on page 22

Terminal Locations
Command/Operations MIS

LOCATION	TYPE TERMINAL
CDC Command Group	2 Cathode Ray Tubes —1 Teletype
Operations Center	1 Cathode Ray Tube —1 Teletype
HQ CDC Staff	—3 Teletypes
ILC	—1 Teletype
COMS Group	—1 Teletype
INCS Group	1 Cathode Ray Tube—1 Teletype
PALS Group	—1 Teletype
CDCEC	—1 Teletype
SAG	—1 Teletype

1. COMMAND PRIORITY OBJECTIVES (CPO): CDC Command Priority Objectives frame the broad substantive objectives for CDC combat developments activities. These objectives are the command direction on which problems of the Army in the field should be given first emphasis. The Command Priority Objectives will be reviewed and re-established each year.

2. COMMAND GUIDANCE MEMORANDUM (CGM): The Command Guidance Memorandum is the basic CDC planning and programming document for a major combat developments objective. For a major program it will: identify problems to be solved; indicate tasks required to address these problems; specify, in general terms, required and allocated resources; and indicate critical milestones and decision points.

3. SIGNIFICANT ACTION LIST (SAL): The Significant Action List is a listing of the most important CDC actions underway in support of the Command Priority Objectives and/or in response to DA and Command Group direction.

4. SIGNIFICANT ACTION CRITICAL POINTS: These are critical points where members of the HQ CDC Command Group become involved in providing guidance, reviewing progress and/or approving completed actions that are contained in the SAL.

BAHT

CDCEC TESTS AIR CAVALRY COMBAT FORCE MIX CONCEPTS

BY SP5 RICHARD DAVIDSON

The experiment's Basic Attack Helicopter Teams were composed of six mixes of attack and scout helicopters (above) used in 79 trials. After the aggressor armored force was spotted, attack helicopters (opposite page) then engaged the "enemy."

From Korea to Vietnam, the history of the Army helicopter is short but dramatic.

In its brief past, the helicopter has served as an observation post; it has transported men and supplies; it has performed rescue missions; and now, in addition to all these, it is an aerial direct fire support system.

The growing success of the helicopter, according to General William C. Westmoreland, the Army's chief of staff, has made it a vital part of the Army team.

To determine the attack helicopter's best role on the modern battlefield, the Combat Developments Command Experimentation Command (CDCEC), at Ft. Ord, Calif., was tasked to conduct an experiment to assist the Combat Developments Command (CDC) in determining how the Army should be organized and equipped to fight in this new third dimension in warfare.

This experiment was titled the "Basic Attack Helicopter Team (BAHT)" and was conducted by the command's Project Team IV under the leadership of its Chief, Colonel Raymond Lehman. The primary purpose of the experiment was to test and compare the capabilities of various Basic Attack Helicopter Teams to acquire and attack an enemy armor force and measure their susceptibility to acquisition and attack by the enemy force.

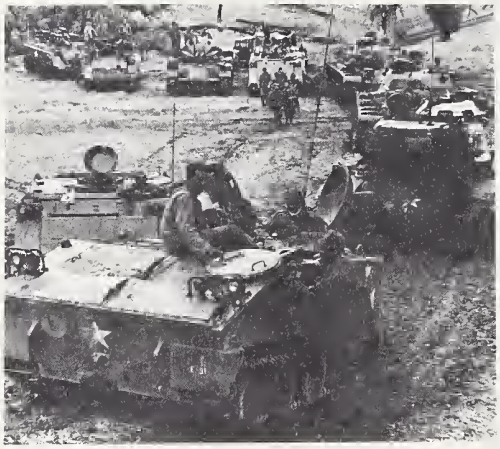
The experiment also provided data on the capabilities of the BAHT to direct field artillery fire as well as the susceptibility of the BAHT to acquisition and attack by hostile aircraft supporting the enemy column.

Additional descriptive data obtained during the course of the experiment concerned the effects of variables—electronic sensors, operating procedures, human factors, weather and topography—on the performance of friendly and enemy systems.

Teams were organized into six various mixes of Light Observation (Scout) and Attack Helicopters. Seventy-nine trials were conducted over four different types of terrain at the Hunter Liggett Military Reservation, CDCEC's field laboratory, which is 85 miles south of Ft. Ord.

The aggressor armored force was composed of medium tanks, armored personnel carriers, scout vehicles, self-propelled air defense vehicles and wheeled vehicles.

The scenario of a typical trial called for the Basic Attack Helicopter Team to land at the Battalion Command Post in a forward area for a quick briefing on the situation. This was set at



Scout helicopters (above) search for an enemy armor column during the experiment. Once detection is made, the scouts direct artillery fire, armed helicopters, and jet fighters for an attack on the aggressor force (right, awaiting assault instructions).

"MANY OF THE LESSONS WILL BE RELATED TO THE ACCB AND TRI-CAP"

H-hour minus 30 minutes. During this period, the aggressor jet fighter conducted an aerial reconnaissance of friendly positions and attacked all targets located.

After the briefing, the Scouts of the BAHT began their search. Upon detection of the enemy armor force, a spot report was radioed to the Command Post.

The Scouts, while remaining vigilant against the return of the enemy aircraft, called in friendly artillery fire and directed attack elements of the team into position.

The attack helicopters then moved into firing position and engaged the aggressor forces' armored vehicles. After three engagements by the BAHT, the trial ended and all forces returned to their staging areas.

Then began the painstaking job of documenting and evaluating the results. In addition to obtaining information about the type mixes that displayed most promise for further experimentation, the evaluations resulted in two other important by-products:

- provided data for an improved training program for the pilots and crews of both scout and attack helicopters;
- provided insights into improved methodology and instrumentation for follow-on experiments.

It was found that the Vietnam experience of attack helicopter pilots, while valuable, still had to be supplemented with a vigorous training program. All aviators had to learn the tactics and techniques of low-level flying and pop-up firing techniques, both of which are considered vital.

Many of the lessons learned in the training phase will be related to the training programs being established for the Air Cavalry Combat Brigade and TRI-CAP Division at Ft. Hood, Tex.

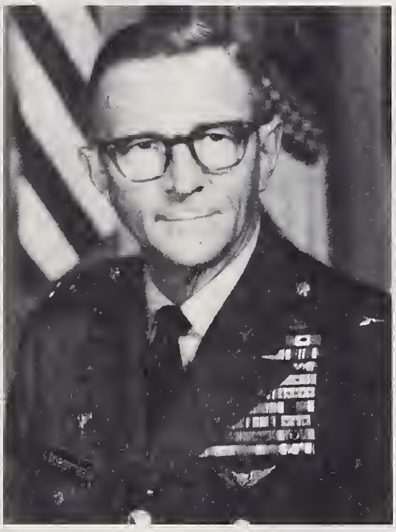
Data gathered during the CDCEC experiment will be used by CDC to determine tactical doctrine, employment and techniques of operation and the ratio of attack and observation helicopters in an attack helicopter team.

As in all experimentation at CDCEC, its computerized data, gathered in simulated battle, insures that the Army—both for the present and in the future—extracts the greatest possible combat capability from its available and projected resources.

SP5 Richard Davidson currently is assigned with the Information Office, CDCEC, Ft. Ord, Calif.

The Road To A Zero Draft

The following statement is by Lt. Gen. George I. Forsythe, former CDC Commanding General and now Special Assistant, Modern Volunteer Army.



The "Modern Volunteer Army" concept represents a carefully conceived and developed program aimed at attracting—and keeping—professional soldiers.

The concept began in January 1969 when a presidential commission headed by former Secretary of Defense Thomas Gates was appointed to study the feasibility of a volunteer armed force. During the same week the Army undertook its own study, entitled PROVIDE (Project Volunteer in Defense of the Nation).

The goal of the PROVIDE study was to examine all possible methods to enhance the attractiveness of military life without sacrifice of professionalism. Upon completion, the study envisioned a three-phase transition over a period of several years.

The first phase would aim at increasing enlistments by increasing the attractiveness of the Army. This stage would not require legislative action, but only modification of existing programs and policies.

The second phase would initiate programs and policies considered essential to the early attainment of a zero-draft goal; these actions would require legislative authorization and the allocation by Congress of sufficient funds.

Phase three would include those additional actions that might be necessary if the previous phases proved inadequate.

Meanwhile, after a year of study, the presidential commission concluded that "The nation's interests will be better served by a volunteer force, supported by an effective standby draft, than by a mixed force of volunteers and conscripts; that steps should be taken promptly to move in this direction; and that the first indispensable step is to remove the present inequity in the pay of men serving their first term in the armed forces. We have satisfied ourselves that a volunteer force will not jeopardize national security, and we believe it will have a beneficial effect on the military as well as the rest of our society."

In May 1970 General W. C. Westmoreland, Army chief of staff, ordered all Army commanders to examine their own commands and determine if there were any unnecessary irritants to soldiers and junior officers. Emphasizing the importance of discarding obsolete policies and practices, he concluded by saying, "I therefore charge you with re-examining our approach to our mission and to our people, to our regulations and procedures, and to our attitudes across the board."

In the early fall of 1970, the general announced that the Army intended to make an all-out effort to reduce reliance on the draft and to create a Modern Volunteer Army.

At his Commanders' Conference in November 1970, the chief of staff charged his commanders to reduce unnecessary irritants and to be prepared to fully support developing programs aimed at the achievement of a Modern Volunteer Army. He directed that reveille and other formations be eliminated except on occasions when they served some useful purpose,

continued on page 26

TRI-CAP: NEW CHALLENGES FOR NEW LEADERS

A Junior Officer Discusses The Potential Of The TRI-CAP Concept In Terms Of The Young Soldier

by 1LT. James H. Damico

On the first day of baseball tryouts for the little-league team, I mistakenly was sent to the part of the field where the Babe Ruth aspirants were assembling. I remember looking with amazement at the size and capabilities of the older, bigger boys. My first impression of the TRI-CAP concept can be expressed in much the same light.

As a young ROTC artillery lieutenant with little more than a dozen combat missions under my belt, I am not at all sure that I understand all I read about the fine tactics and grand strategy implicit in the TRI-CAP concept.

But as it was on my first day on the baseball field, when I grew quickly aware that the Babe Ruth club offered an even greater challenge than the Little League, so also has come an awareness of the immense potential of the TRI-CAP Division.

In this article, I want to explore that potential in terms of the young soldier, enlisted and commissioned alike, recognizing that much being said here may be substantially alien to the immediate realities at Ft. Hood, Tex. Moreover, this exploration will, of necessity, be personal in nature, since a young officer has only a limited experience upon which to construct a postulation.

The first real crunch point in any young officer aspirant's life is the choice he makes regarding the branch in which he will serve. Regardless of the type orientation he has had, he still is confronted with choosing a career field long before he is familiar enough with the overall Army picture to really anticipate his long term needs and interests.

Ironically enough, career planning encompasses many years of diversified experiences and personal maturity for the majority of people. It would seem more sensible then that branch choice be the logical sequitur to a sound multi-branch apprenticeship.

A similar situation holds true for enlisted men too. The embryonic soldier must decide (or have decided for him) at the outset which MOS pattern he will follow. Giving the new soldier extensive training and diverse assignments in each of the combat arms branches before he must choose a field of concentration promises rich rewards. The current VOLAR experiments might be a step in that direction.

At this juncture, the reader might well ask, "This is all very good, but what has it to do with TRI-CAP?"

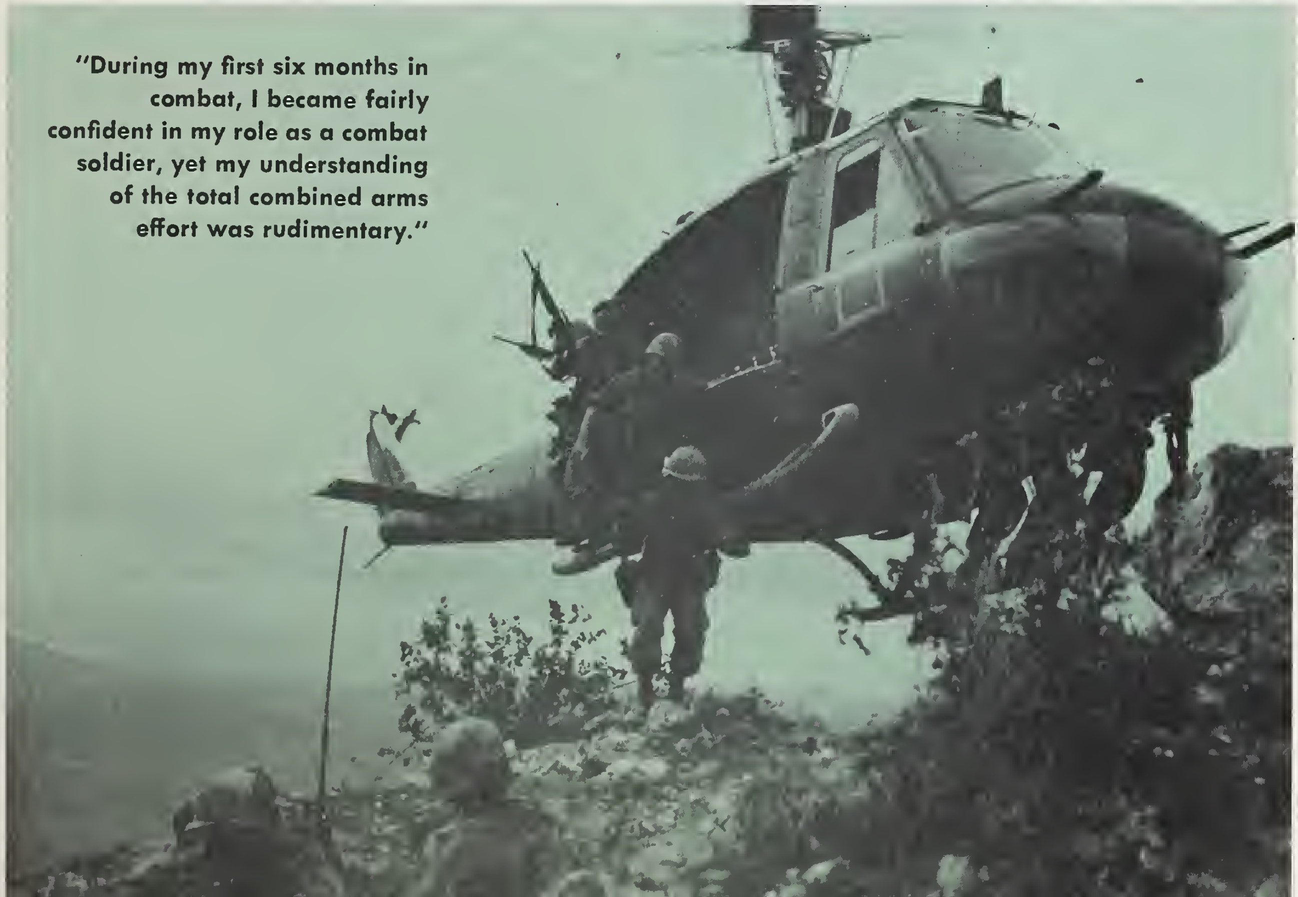
And the answer is that with its organization structure and its potential for cross-attachment and requirement for integrated training, the TRI-CAP Division holds extraordinary promise as a vehicle for providing young soldiers with a clearer view of how all the parts mesh.

As a new officer in the basic course, I remember very distinctly the orientations, the endless array of blackboards, slide-rules and training aides. Learning to be an artillery journeyman was difficult; but simultaneously trying to absorb instruction on the overall battlefield scheme was bewildering and frustrating.

Because of my inability to fit together all the pieces of the puzzle I found it difficult to identify with the Army and perceive it as a career option.

The shallow attempts at other branch orientations merely reinforced my initial feelings of inadequacy and I approached my first assignment with anxiety. I was hard-pressed to envision myself being a successful artilleryman while at the same time camouflaging my ignorance in relation to the bigger picture. It is here that I would hope that the cross-attaching of units with tailored specifications making up the well-rounded combined arms team of TRI-CAP would apply—in effect, TRI-CAP units composed of TRI-CAP people.

The TRI-CAP Division, of course, cannot alleviate the narrowness of the branch courses, but it can provide a test bed for extensive cross-training in branches that would cause a general re-evaluation of the basic course syllabi. A simple plan of rotation of assignments for junior officers and non-commissioned officers through combat arms branch jobs could result in professional enhancement. An artillery lieutenant, such as myself, might spend six months as a forward observer or six months as an executive officer in a firing battery and his final half year as a rifle platoon leader in an infantry unit. Or, in the case of the infantry lieutenant, a combination of assignments to include experience as a tank commander with a mechanized unit could really prove broadening. The possibilities inherent in the TRI-CAP concept have been successfully implemented by innovators in the past. Based on their results there is every reason to trace today's combat soldier back into the classroom.



"During my first six months in combat, I became fairly confident in my role as a combat soldier, yet my understanding of the total combined arms effort was rudimentary."

During my first six months in combat, I became fairly confident in my role as a combat soldier, yet my understanding of the total combined arms effort was rudimentary. At initial briefings before a mission, I frequently had trouble visualizing the role other combat elements played in the combined scheme of maneuver. Nor was my dilemma exclusive to me. All around me I sensed elements operating with a decreased sense of involvement and motivation. The lack of what I call an "integrated combat morale" was very evident.

On other occasions, because of the poor understanding and rapport between "sister elements," weak coordination along with improper utilization of capabilities resulted. Quite naturally, critical situations arose forcing the branches into a tight partnership. It was during one such situation that I personally realized my own inflexibility in operating from any other than my own frame of reference. Because of the loss of a platoon leader as a combat casualty, I, as an artillery forward observer, was forced to assume command of an infantry rifle platoon. Based on my limited infantry background (eight hours of tactics in basic), it was little wonder that I felt very inadequate in the role of the "leg lieutenant." It was at this time, more than ever before, that I felt the repercussions of my narrow branch training.

The TRI-CAP Division, by the very nature of its conceptual design, would force integration of the branches; not totally so, perhaps, but certainly more than any organization now in the force structure.

Near the end of my six months in the field, I sensed a certain listlessness within me. At first I attributed my faltering attitude to combat weariness and began a countdown till R&R time. But before it came, I suddenly was taken out of the field and given a position of responsibility at the Field Force level.

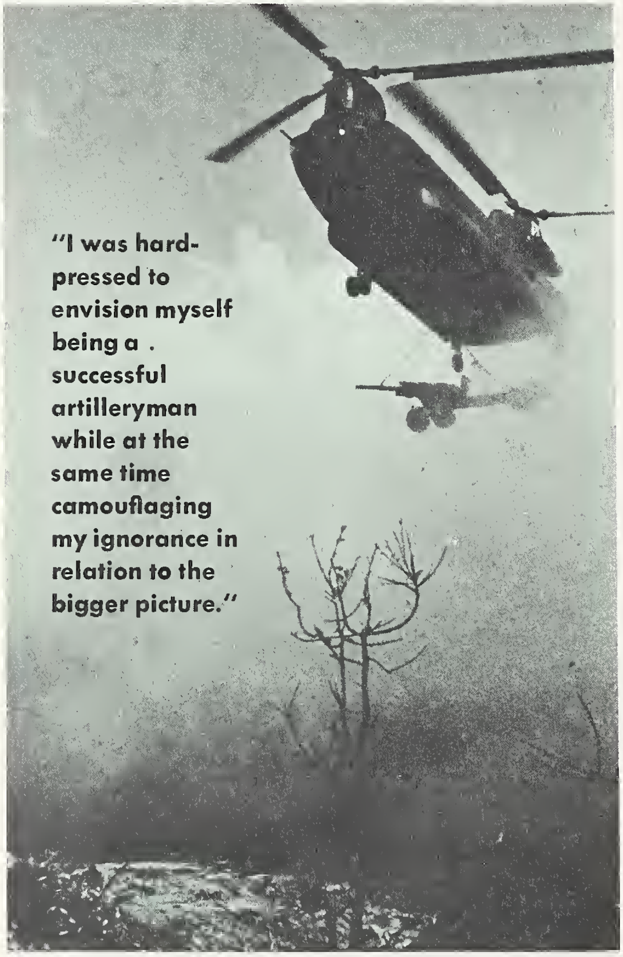
Almost immediately I felt recharged and my war weariness gave way to bursts of ambitious energy. The next part of my tour flew by as I worked hard learning a specific field with which I was relatively unfamiliar. As I developed some proficiency in my new job, I realized I might never have uncovered these different skills were it not for the fortuitous change in assignments.

This again, is the promise of TRI-CAP—a vast potential for a variety of assignments. A single direction of energies may frustrate a soldier's intra-branch curiosities and stifle his initiative, but a multi-faceted commitment will probably result in the freeing of an untapped reservoir of skills.

For the combat soldier, the process of challenges and achievements must occur in a continuous and predictable progression in order to hold his interest and motivation. He must be challenged with mental versatility as well as physical exertion to make his career seem meaningful.

continued on page 22

1LT James H. Damico is a Vietnam veteran and recently completed his tour of active duty with the Information Office, CDC Headquarters, Ft. Belvoir, Va.



"I was hard-pressed to envision myself being a successful artilleryman while at the same time camouflaging my ignorance in relation to the bigger picture."

For God and Country

Out of World War II came a beautiful poem from a talented GI who found consolation from an awakened faith a few days before he died. The following poem was found in his pocket in his own handwriting:

"Lord God, I have never spoken to you,
But now I want to say: How do you do?
You see, God, they told me you didn't exist;
And, like a fool, I believed all this.

Last night from a shell hole I saw your sky
I figured right then they had told me a lie
Had I taken time to see things You made,
I'd have known they weren't calling a spade a spade.

I wonder, God, if you'll take my hand,
Somehow I feel that you'll understand.
Funny I had to come to this hellish place
Before I had time to see Your face.

Well, I guess there isn't much more to say,
But I'm sure glad, God, I met You today.
I guess Zero hour will soon be here,
But I'm not afraid since I know You're near.

The signal! Well, God, I'll have to go.
I like You lots, I want you to know
Look, now, this will be a horrible fight,
Who knows, I may come to Your house tonight.

Though I wasn't friendly to You before
I wonder, God, if You'd wait at Your door.
Look, I'm crying! Me, shedding tears!
I wish I'd known You these many years.

Well, I'll have to go now, God. Good-by.
Strange—now, since I met you, I'm not afraid to die."

Happy is the man who has faith. It is true, he must also walk among dreadful shadows on this earth, but he moves among them as a little child crossing a dark room with a wildly beating heart, who knows that on the other side, in the next room, his father is waiting in brilliant light to receive him with open arms.

Chaplain (Col) Joseph S. Chmielewski
Staff Chaplain, CDC

A SHORT COURSE IN HUMAN RELATIONS

The six most important words:
I ADMIT I MADE A MISTAKE
The five most important words:
YOU DID A GOOD JOB
The four most important words:
I'M PROUD OF YOU
The three most important words:
IF YOU PLEASE
The two most important words:
THANK YOU
The least important word:
I

IDCS continued

work progresses. These questions are being asked in arriving at the initial list:

★ Does the action make a direct contribution to the Commanding General's Command Priority Objectives?

★ Does it meet a high priority need of a major user command?

★ Has the action been singled out by General Officer emphasis?

★ Are large numbers of CDC resources involved?

Processing of this significant action and critical point information is a monumental task. In fact, if DSC/OPS had to operate the system manually, as is done today, it probably could effectively monitor only 25 to 35 actions.

In the "manual mode" the action officer prepares fact sheets or staff papers which are coordinated across the staff and forwarded up through a succession of middle managers. Often this process takes too long and the needed information reaches the commander too late to influence a decision.

The alternative is an automated system, using techniques referred to by General Norton at the beginning of the article. CDC will be experimenting with such a system this fiscal year. Expected achievements include:

● Give CDC commanders immediate access to management information on key command programs.

● Eliminate current time lags between request and retrieval of information (normally from 1 to 4 days).

● Improve the accuracy and timeliness of all data in the management information system by "exposing" it.

● Increase the number of MIS retrievals by providing a convenient, high-speed retrieval method.

● Provide subordinate commands on-line access to the "Project Control System" which "automates" use of task flow chart network data.

This experiment with the Command/Operations MIS is an attempt to apply IBCS concepts to the management of combat development activities. In essence, it is a developmental experiment. If the system succeeds the techniques will be applicable to other major Army commands. And, of course, the experience will be useful to the IBCS program.

To sum up, the CDC concept of management has been undergoing "evolutionary" change since CDC was formed in 1962. The current concept builds on past experience. It also seeks to experiment with and apply advanced techniques and the technology of computers. Thus, Combat Developments Command's own style of operation will keep pace with its vision of operations for the future Army in the field.

TRI-CAP continued

Today's modern Army is appealing to a select type of individual, one who will be more interested in the overall concept of involvement and participation than in the traditional appeal of a specific branch. One who perceives his ultimate role as that of a supervisor, knowledgeable at least in part, in many different areas of service. A leader who is too pre-occupied with broadening his fields of knowledge to get caught up in the actual technicalities of one specific area . . . a TRI-CAP leader.

The complex and diverse opportunities available under TRI-CAP as I have outlined it here probably would mean a substantial revision (and extension) of the basic branch courses. It might also require a change in philosophy regarding the role of the branches per se.

But one thing to me is clear. The challenges involved in the making of a "TRI-CAP Soldier" are exactly the ones that will appeal to the caliber of man that the Modern Volunteer Army seeks to join.

Spot Reports

Law Day

FT. ORD, Cal. . . . "Protest has brought a new dimension to change in our country," commented Captain A. W. Bolt II, Judge Advocate of the Combat Developments Command Experimentation Command (CDCEC) headquartered here.

"But protest alone accomplishes little," the young legal chief of CDCEC stated. "For permanent change, new thinking still needs new laws—not violence." This type of thinking was responsible for the theme for Law Day USA in 1971, "Channel Change through Law and Reason."

The emphasis on Law Day this year was the importance and urgency of resolving grievances and inequities through orderly and lawful means, via the nation's courts, legislatures and Congress—and not the tactics of militancy, riot and destruction.

Chaplain Briefing

FT. LEE, Va. . . . Chaplain (Col) Chester R. Lindsey, Deputy Commandant, US Army Chaplain School, Ft. Hamilton, N.Y., was briefed on the current programs underway within Combat Developments Command (CDC) which affect the chaplains in the field during his recent visit here.

The briefing was conducted by Chaplain (LTC) Louie W. Walter, Director, CDC Chaplain Agency.

Accompanied by Chaplain (Col) William E. Paul, Jr., the Ft. Lee Staff Chaplain, Chaplain Lindsey made a courtesy call on Brigadier General Ross R. Condit, Jr., Commanding General of the CDC Personnel and Logistics Systems Group.

Panel Meets

FT. ORD, Cal. . . . The Army Scientific Advisory Panel met for the second of its quarterly conferences this year with the Combat Developments Command Experimentation Command (CDCEC) headquartered here.

The mission of the panel is to advise the Secretary of the Army, the Chief of Staff, the Assistant Secretary of the Army (Research and Development) and the Chief of Research and Development on overall scientific technological matters of concern to the Department of the Army program and to provide long range guidance in those areas.

Among the approximately 80 persons attending were Panel Chairman, Mr. L. H. O'Neill, president of Riverside Research Institute in New York City; General Henry A. Miley, Army Materiel Command, Washington, D.C.; the Honorable Robert L. Johnson, Assistant Secretary of the Army for Research and Developments, Washington, D.C.; Lieutenant General John Norton, commanding general of CDCEC's parent command at Ft. Belvoir, Va.; Dr. R. A. Montgomery, conference Vice-Chairman and head of the Naval System, Boeing Aircraft, Seattle, Wash.; Dr. Marvin E. Lasser, chief scientist, Department of the Army; and Major General George Sammet, Jr., Deputy Chief of Research and Developments, Washington, D.C.

After attending high level conferences, the panel members toured the Hunter Liggett Military Reservation, CDCEC's field laboratory, for a first hand look at current experimentation activities.

During their day at the field laboratory, they were briefed on CDCEC experimentation and instrumentation; the command's contributions to the CDC research and developments program; and, during the demonstrations which followed, they viewed a typical helicopter versus armored force experimental trial.

Officers Speak

FT. SAM HOUSTON, Tex. . . . Two officers assigned to CDC's Medical Service Agency (CDCMSA) recently were speakers at a short course presented at Fitzsimmons General Hospital at Denver, Colo.

Colonel John G. Morgan, Chief of the Doctrine Division, and Lieutenant Colonel Louis C. Mueller, Chief of Organization and Equipment Branch, Organization Division, were the speakers for CDCMSA. Col. Morgan spoke on "Medical Implications of Current Doctrinal Studies" and Lt. Col. Mueller's topic was "A TOE Unit: From Concept to Evaluation."

The course, presented under the auspices of The Surgeon General, was titled, "Current Problems and Trends in Medical Plans and Operations," and was attended by AMEDD personnel from all parts of the world.

During Col. Morgan's presentation he included information which illustrated the relationship between elements of CDC and the Office of The Surgeon General (OTSG), as well as the current status of combat developments studies of particular interest to the Army Medical Department.

In his address, Lt. Col. Mueller used the CDC-developed Combat Support Hospital as a vehicle to illustrate the system used for developing and testing a new TOE.

Chief Honored

FT. ORD, CALIF. . . . The Legion of Merit recently was presented to Colonel Nicholas H. Sebastian of the Combat Developments Command Experimentation Command (CDCEC).

The award was presented by CDCEC's Commanding General, Brigadier General Elmer R. Ochs.

The medal was awarded him for service to the command while serving as Chief of Project Team, I, Office of the Deputy Chief of Staff for Experimentation from August 22, 1969 to April 1, 1971.

He was cited for his leadership and competence on the YO–3A Quiet Aircraft experiment, on the Direct Fire Simulator System experiment and the comparison of the TOW Missile and the 106mm recoilless rifle systems.

Col. Sebastian has been in the Army 27 years, and, besides stateside assignments, has served in Vietnam, in China during World War II, in the islands of the Pacific, and two tours of duty in Europe.

SIAF Judges

FT. ORD, Calif. . . . Judge, arbiter, official . . . Umpires are called many names, not all of them kind.

However, umpires of the Combat Developments Command Experimentation Command (CDCEC) concern themselves only with their radio code names while participating in the SIAF (Small Independent Action Forces) experiment (See May 1971 *Arrowhead*).

With the need of controlling player personnel to insure valid data, 15 umpires were selected from the Army and Marine Corps for the three month long experiment.

The impartial observers, headed by Major Charles McLaughlin from CDCEC's Project Team II, were divided into aggressor and friendly teams for the experiment conducted at CDCEC's Field Laboratory on the Hunter Liggett Military Reservation.

Extensive training was necessary. In 13 days, the umpires received 135 hours of study in scouting, patrolling, first aid, communication procedures, day and night compass courses, Squad tactics, and, since the aggressors carried weapons to add realism, assembly and disassembly of the Russian-designed AK–47.

Six umpires were assigned to the "enemy." The other eight umpires dealt directly with the friendly SIAF teams. "An umpire joined the six-member team for the 14 days it was involved in the experiment. He helped them acquire gear and prepare for the six days they spent in the field," Major McLaughlin said.

The umpire observed the team as it went through day and night compass courses, target designator and range estimation courses and familiarization with the electronic gear.

In the field the umpires acted as guides to keep the patrol on the right path. If a checkpoint was missed, the referee radioed the Tactical Operations Center and explained why. He also recorded reactions of the team when contact was made with an aggressor patrol.

When a team returned from the field, the umpire was debriefed along with the other patrol members to insure that no important information was overlooked. He also was required to evaluate the overall performance of the team and the patrol leader.

The terrain was not the familiar diamond of a baseball infield and their vocabulary did not include "strike", "safe" and "Yer out!" but the role of the CDCEC umpire in jungle green was as important in CDCEC's war game as baseball's "man in black."

Civilian Honored

FT. BELVOIR, Va. . . . The Decoration for Exceptional Civilian Service has been awarded to Mr. John E. Harris, Materiel Program Officer, Plans and Programs Division, Materiel Directorate, Headquarters, Combat Developments Command.

Mr. Harris was awarded the Decoration for his exceptionally outstanding achievements as Chairman of the Joint Combat Developments Command/Army Materiel Command Ad Hoc Board on Materiel Development Objectives/Requirements Documentation and "his continuous preeminent performance of all assigned duties during the period 2 January 1967-5 June 1970."

The award was presented to Mr. Harris by Lieutenant General John Norton, commanding general, Combat Developments Command.

One of the major accomplishments of the Board was the creation of the Materiel Need Concept, a new management procedure to greatly improve and reduce the cost and time involved in the materiel acquisition process (See the November 1970 *Arrowhead*).

Major achievements of the Materiel Need Concept are:

- A single materiel requirements document replaces four major documents in the former system.
- The Materiel Need Concept reduces the present two and one-half years allotted for paperwork processing time to approximately 30 weeks for both the Qualitative Materiel Development Objective and the Qualitative Materiel Requirement, thus significantly reducing inflationary and real-price increases over longer periods of time.
- New procedures during the Concept Formulation Phase of materiel developments insures that items do not prematurely enter into engineering development.
- Cost overruns are reduced to a minimum or eliminated entirely as the most thorough, realistic and accurate cost analysis possible for future weapons are now required and programmed into the system.
- The number and therefore the cost of program change requests are greatly decreased or eliminated as many steps in the developmental cycle are now being accomplished jointly by CDC/AMC.
- Competitive prototype items are used to verify feasibility prior to contract definition.
- Engineer Tests/Service Tests are accomplished before production to guarantee that any deficiencies discovered in engineering development are eliminated.

Soldier of Quarter

FT. BELVOIR, Va. . . . Specialist Five William H. Witcraft, an information specialist assigned to the Information Office, has been selected as HQ CDC "Soldier of the Quarter."

SP5 Witcraft was selected for the award by a group of senior non-commissioned officers. He was chosen because of his superior knowledge of military subjects, bearing, and appearance.

SP5 Witcraft was honored with a Certificate of Achievement, a $75 check, and a three-day pass presented by Lieutenant General John Norton, commanding general of Combat Developments Command.

On Target

FT. LEE, Va. . . . The Combat Developments Command Personnel and Logistics Systems Group (PALS) was well represented in the Ft. Lee Commanding General's Rifle and Pistol Matches by having its team bring home four trophies.

The rifle team took second place with Lieutenant Colonel Billy H. Taylor, Materiel Requirements Office, winning the high new rifle shooters award.

The pistol team did equally well by placing third in their field and having Colonel Albert K. Tank, Director of Materiel, win the high new pistol shooters trophy.

The rifle team members were Colonel Albert K. Tank, Lieutenant Colonel John J. Vargo, Lieutenant Colonel Billy H. Taylor, Major Richard Lindquist, Lieutenant Joe J. Kunkler and Specialist Four Henry V. Wisniewski.

The pistol team was made up of Colonel Albert K. Tank, Lieutenant Colonel John J. Vargo, Lieutenant Colonel George Merklinger and Lieutenant Colonel Billy H. Taylor.

Advisor Honored

FT. LEE, Va. . . . In recognition of his contribution to the Operations Research/Systems Analysis Executive Course, the staff of the US Army Management School, Ft. Belvoir, Va., presented a Certificate of Appreciation to Mr. Ellwood C. Hurford.

Mr. Hurford is the Scientific Advisor to the Combat Developments Command's Personnel and Logistics Systems Group (PALS).

Mr. Hurford has served as a guest instructor in operations research at the Army Management School since 1968. His topics covered the use of various analytical techniques by PALS in accomplishing their mission. In particular, he described a major CDC study effort which concerned the utilization of the C5A aircraft in airlines of communication. Problems in providing resupply, maintenance and transportation support were presented with emphasis placed on the role of the research analyst in providing solutions.

In May 1969 Mr. Hurford was awarded the title of Honorary Lecturer in Operations Research by the Management School. In the future, he will not have to travel far to serve as a guest speaker since the Executive Course will be conducted at the Army Logistics Management Center here beginning in May 1971.

Spot Reports
continued

Briefing Held

FT. LEE, Va. . . . Problems in providing logistical support in contingency operations was the subject of a two-hour briefing and discussion on 6 April at Ft. Bragg, N.C., by two representatives of the Combat Developments Command Personnel and Logistics Systems Group (PALS).

The briefing was presented to Major General Blanchard, Commanding General of the 82nd Airborne Division, and members of his staff.

Colonel David P. Heekin, Deputy Commander of PALS, and Mr. Ellwood C. Hurford, Scientific Advisor, discussed concepts for deploying and supporting combat forces in response to contingency requirements. These concepts have been developed by PALS as a part of its responsibilities in providing answers to the question "How should the Army fight and be supported."

The PALS representatives found an interested and challenging audience at Ft. Bragg since the 82d Airborne Division must be ready to respond in contingency situations with very little notice.

The briefing and discussion sessions are examples of CDC's interest not only in the Army of the future but in the very real problems facing the Army of today.

Zero Draft continued

that a continuous open-door policy be initiated, and that a thorough revision of the Army Command Maintenance Management Inspection system and the Inspector General inspection system be undertaken. Other innovations were announced, including the updating of pass and sign-out policies and the introduction of 3.2 percent beer in Army mess halls.

January 1971 saw the launching of Project VOLAR (Volunteer Army), a large-scale experiment at three posts: Ft. Ord, Calif.; Ft. Benning, Ga.; and Ft. Carson, Colo. In February Ft. Bragg, N.C. was added to the experiment, which is aimed at determining the effectiveness of certain expenditures in the effort to achieve zero-draft by July 1, 1973, the goal established by the President.

During VOLAR's first test phase, the commanders of the experimental posts have been free to adopt measures which they feel will produce results. They have dropped non-productive measures and are adopting new and progressive policies.

Beginning in July and drawing on the experience of the four-post experiment, VOLAR will expand to a total of 15 posts. Then, during fiscal year 1973, measures which have proved effective will be extended Army-wide.

It is estimated that enlistments and reenlistments must more than double if the Army is to achieve its goal. In addition, during a period of shrinking resources, it will be increasingly difficult to find funds to make the Army more attractive and to reduce irritants to the soldier.

But the Army is building its effort on a philosophy articulated by General Westmoreland in the fall of 1970:

"Our Army is an organization of young people. Today the average age of those in the Army is less than 23 years. Over three-fourths of our enlisted strength has less than three years of service. The young men who are and will become our soldiers and junior officers have attitudes that differ from those of our older group of officers and noncommissioned officers.

"To ignore the social mores of this younger group is to blind ourselves to reality . . .

"Nothing is considered sacrosanct except where military order and discipline—the soul of the Army that insures success on the battlefield—are jeopardized. In this, we cannot and will not yield. We will continue to hold to the principles that have traditionally guaranteed this Nation a loyal Army . . .

"Today, the Army of the United States has committed itself to moving toward a volunteer force with imagination and full energy."

The TOE And You Or, Let's Get Organized

by Lt. Col. Harold Stocks

The Army Combat Developments Command (CDC) wants your ideas on how to improve Tables of Organization and Equipment (TOE). To convince you that we're in earnest, we've included a handy blank form at the end of this article.

You can be assured this request is not based on a shortage of recommendations or guidance for TOE development. CDC gets plenty of recommendations submitted in accordance with regulations. There is even an "ad" in Section I of every TOE telling how to submit recommendations for changes. Both the regulation and Section I of the TOE specify that recommendations should be submitted through command channels. Perhaps this formality has dampened your zeal to let CDC know what changes you would make in the TOE of your unit. As they say on Madison Avenue, take advantage of this special offer.

You might now ask, "Why should I submit suggestions on a TOE when my unit is not organized directly under a TOE?" Less than 10 per cent of the units are. The other 90 or so per cent are organized under a Modification to the Table of Organization and Equipment (MTOE). Why is this so, and what is the relationship between the TOE and MTOE? To answer the first part of this question we need to understand the purpose of each of these two systems.

The TOE prescribes the *normal* mission, organizational structure, and personnel and equipment requirements for a military unit when it is deployed or committed to sustained combat. TOE provides a standard method of documenting the organizational structure of the Army in the field and the relationship between unit requirements and authorizations. The TOE is also the basis for the MTOE—which is used to alter the basic TOE in order to reflect the particular needs of a unit or group of units. The MTOE is also used to organize units to meet personnel or equipment constraints. It may also be used to change an existing MTOE.

The point is that most TOE are developed under a concept which visualizes the employment of a unit anywhere in the world. The MTOE may be used to adapt the TOE to a specific geographical area of the world or to meet special missions or operational requirements.

CDC does not participate in the development or approval process of MTOE. This is strictly between the major Army commanders and

Department of the Army (DA). CDC does, however, review all DA-approved MTOE for organizational trends which may have worldwide application.

With this explanation of what a TOE is and is not, we can now look more closely at the TOE and the TOE development process.

CDC is responsible for developing all TOE except for a small number which are prepared by the Army Security Agency. TOE development is triggered by a variety of means. Usually this action starts from the approval of a CDC conceptual or doctrinal study. There are some notable exceptions. One was the development of a TOE for a light infantry brigade based upon our experiences in Vietnam. Materiel development such as the Rome Plow (treedozer), used so successfully in Vietnam, resulted in the development of a Land Clearing Company using this piece of equipment. Who knows, at this moment you might be sitting on an idea CDC could use in the development of TOE.

Once it has been determined that a new TOE is to be developed or that a change or major revision to an existing TOE is needed, one of CDC's agencies in the field goes to work. Most CDC agencies are collocated with the Continental Army Command (CONARC) schools and Army Materiel Command (AMC) boards of the same function or branch orientation. For example, CDC's Infantry Agency, the Infantry School and the Infantry Board are all located at Ft. Benning, Ga. Early in the development cycle, the TOE is coordinated with the counterpart school and board.

Coordination is also accomplished with other CDC agencies as appropriate. For example, TOE for units which include organic aircraft are coordinated with CDC's Aviation Agency, located at Ft. Rucker, Ala.

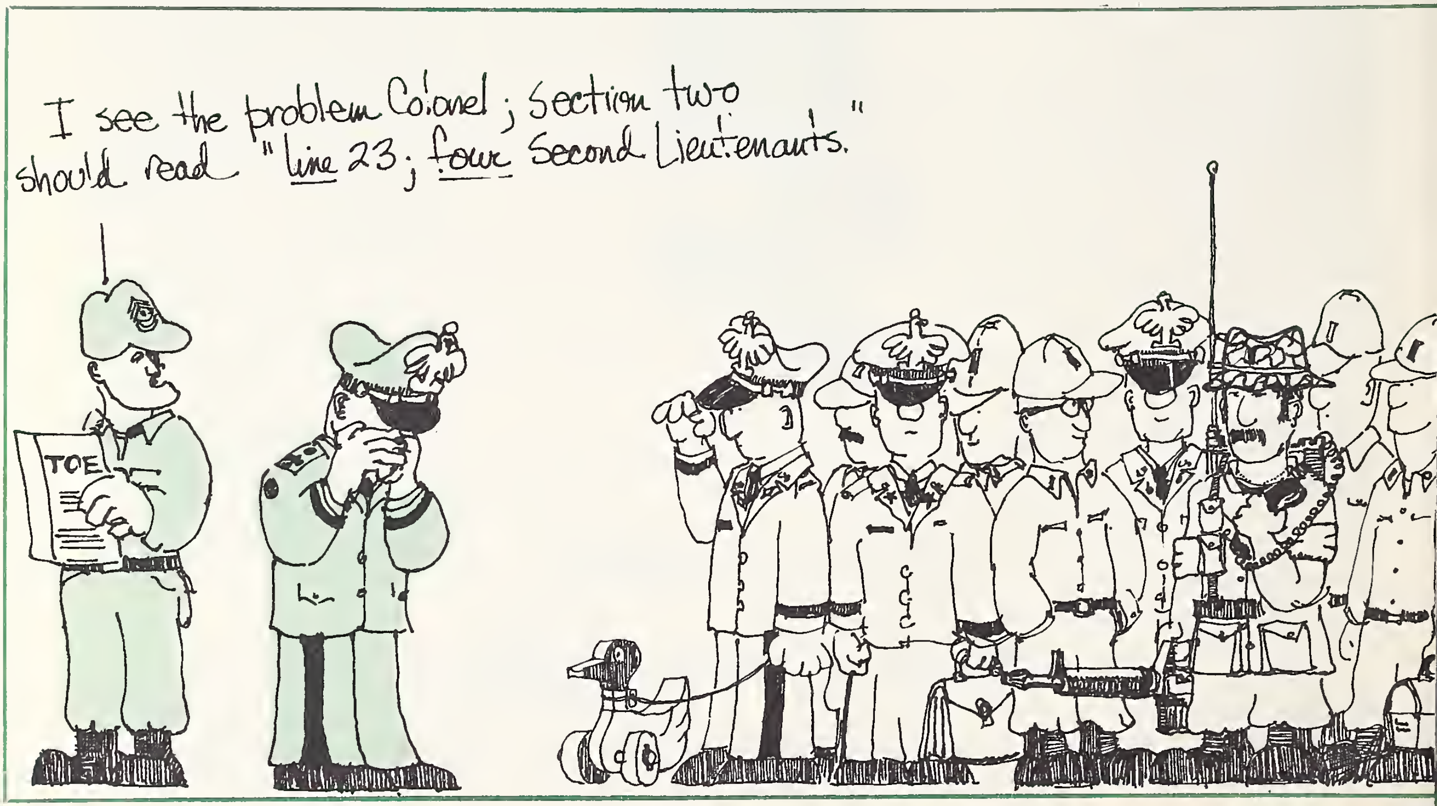
The TOE then is forwarded through command channels to HQ CDC where it is thoroughly analyzed to insure that the organization conforms with approved doctrine and that personnel and equipment allowances are correctly reflected.

The document is then prepared for area of interest review. This means staffing through AMC for equipment implications and with CONARC for training implications.

After the area of interest review, the normal development cycle continues. Comments and recommendations from AMC and CONARC are either incorporated in the TOE or submitted as unresolved issues to DA for resolution during DA level staffing. After DA approval, the TOE is returned to HQ CDC, where it is prepared in final form and submitted to the Adjutant General for publication and worldwide (Army) distribution.

What do you find in a TOE? The heading of the TOE gives you the title and number of your TOE. Under the title is the designation for a unit organized under the TOE. There are blanks to show where your unit's alphabetical and numerical designations are inserted.

Lieutenant Colonel Harold W. Stocks currently is assigned with the Organization and Equipment Division, Directorate of Organization, CDC Headquarters, Ft. Belvoir, Va.


I see the problem Colonel; Section two should read "line 23; four Second Lieutenants."
TOE

Section I of a TOE has valuable information often overlooked. A chart portrays the organization of the unit. A concise mission statement defines the normal tasks the unit is designed to perform. Where the unit fits into the big picture is shown in assignment and basis of allocation statements. A paragraph lists the inherent capabilities and limitations of the unit to accomplish its mission.

Your unit is assigned a category based on its mission. Unit Category I applies to units whose mission includes seizing and holding ground and destruction of the enemy together with units whose mission is to support by fire. Category II units support category I units and provide assistance of a non-tactical nature. The Category III unit's mission includes service and operations in support of a combat area from a communications zone. Mobility of the unit is given and normally expressed as a percentage. This indicates the percentage of the unit that can be relocated in a single move with organic transportation. The mobility was determined based on a suggested loading plan that is prepared to support the draft plan TOE. This loading plan is not, however, published as part of the TOE.

A part of Section I often overlooked is the equipment portion. There is some good information in this paragraph about the equipment detailed in Section III. More important is some information and listing of publications pertaining to equipment *not* in Section III. We will look at this later. The publications listed are essential parts of your unit's reference files. Section I also has qualifying remarks concerning quantities and types of personnel and equipment.

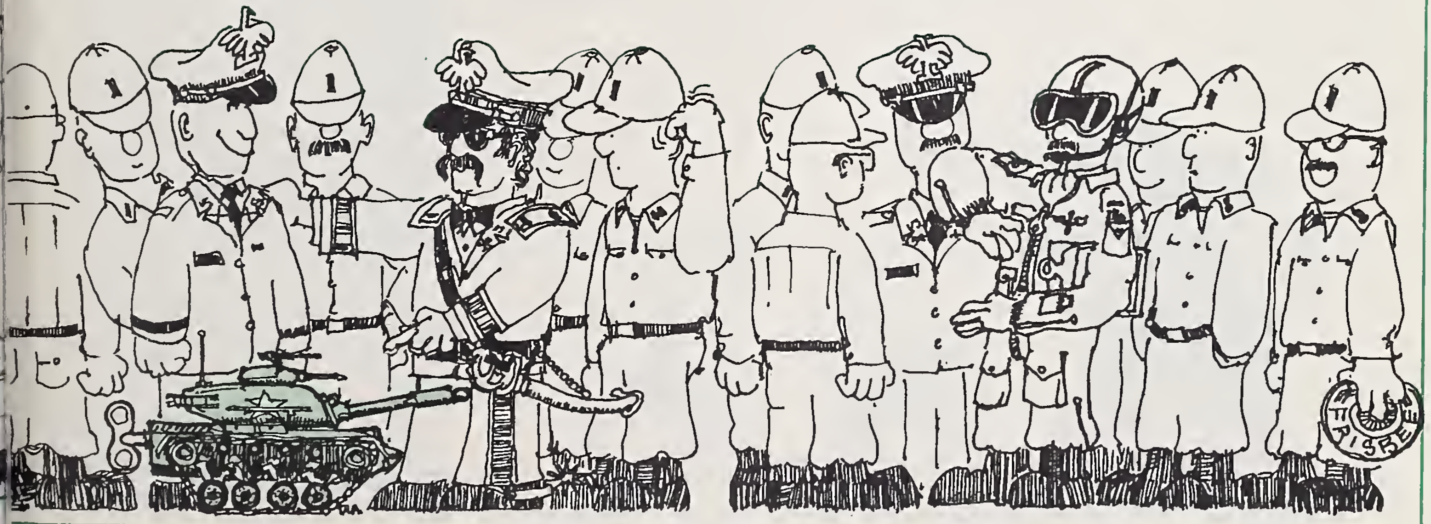
A special instruction portion of Section I contains the "ad" mentioned earlier which sets forth the manner in which recommendations for changes are submitted through command channels. So do not overlook Section I when making a critique of your TOE for possible recommended changes.

Section II of the TOE prescribes the number and types of personnel, and, no doubt, you already have some thoughts about changes here. Personnel positions are identified by paragraph and line number. Each position includes a description or title, grade, MOS and requirements at the three strength levels.

How did CDC arrive at the personnel allocation in the first place? Several sources are used. Approved studies may carry recommendations for the number and type of positions in a particular organizational element—for example, a rifle squad. Part of the development of new equipment, such as a tank, is to determine the optimum personnel requirements for operation, maintenance and support of that equipment. Complete systems, such as a logistical support system, will undergo exhaustive tests to establish the minimum personnel and equipment requirements.

To determine some positions in a TOE, a manpower authorization criteria (MACRIT) is used. Specific position criteria for combat support and combat service support activities in TOE is found in AR 570–2, Orga-

ILLUSTRATIONS BY
LT DAVE ARNOLD



nization and Equipment Authorization Tables—Personnel. From this MACRIT the number of certain positions required may be computed.

As an example, the number of cook positions is based on personnel to be fed. Maintenance positions are determined by a formula using the amount of equipment, manhours required to maintain that equipment and available productive manhours. And did you know that certain non-productive time is figured into the number of positions required? Guard, KP (old Army), work details, time for personal needs and even time lost during unit movement are considered.

To get a breakdown on the grades and military occupational specialties we consult the ARs dealing with MOS. This guidance is prepared by the Office of Personnel Operations, DA, in the form of a standard of grade authorization, which is developed during the development of a particular MOS code.

The key point to all this is that the TOE developer uses criteria in development of TOE.

Moving to Section III of the TOE you will find a listing of the equipment requirements. Equipment is listed by paragraph in Line Item Number sequence. The three equipment levels coincide with three strength levels of Section II. (Levels 1, 2, and 3 or 100, 90 and 80 per cent respectively). The materiel requirement counterpart of a MACRIT is called a basis of issue (BOI) plan. A BOI plan prescribes the number of items to be issued to an individual, a unit, a military activity or to be used with a piece of equipment. DA approval of a BOI plan is required before a new item can be included in the TOE.

Other equipment authorization criteria is found in AR 310–34, Equipment Authorization Policies and Criteria and Common Tables of Allowance. How AR 310–34 is used to determine equipment required is contained in the boxed example.

What don't you find in a TOE? Instructional, informational and reference material relative to military training and operations is not included in your TOE. For this you need only consult the field manual that contains this information for your unit. Mentioned earlier was equipment not listed in Section III and publications pertaining thereto. As a general rule only non-expendable equipment is included in TOE. Expendable items are authorized by SB 700-50, Expendable Items (Except: Medical, Class V, Repair Parts and Heraldic Items) and SB 8-100, Army Medical Department Expendable Supplies.

Non-controlled equipment may be authorized for your unit by Common Tables of Allowances (CTA). Such equipment isn't listed in Section III of the TOE. The applicable CTA is among the reference documents listed in the equipment section of Section I. Flags, guidons and other such heraldic items are authorized by AR 840–10, therefore, they are not listed in TOE.

Changes to TOE are published in two varieties—consolidated and individual. In the TOE development trade individual changes are called numbered, scheduled or separate changes. The consolidated change table reflects DA-directed changes that are applicable to a multiple number of TOE. Consolidated changes may include both personnel and equipment changes. These are usually straightforward, one-for-one type changes which do not affect the mission or operational capability of the unit.

"Dear CDC; we have an idea for our TOE you may be interested in..."
TOE (ETC.)

A TOE is under development for a unit that will operate a mess which will feed 230 personnel. A check of AR 310-34 shows that four field ranges are required per 226–325 individuals to be messed. Based on the number of field ranges, we can determine that one accessory outfit is required based on one per four field ranges. Kitchen tents are authorized one per accessory outfit. A minimum of one tentage repair kit is authorized for a unit with tentage.

For simplicity, the example should end here, having determined the requirement for four items of equipment. The TOE developer gos further, however. Mobility of the unit may require a kitchen truck and water trailer. Maintenance of the kitchen's truck and trailer is considered when vehicle maintenance personnel are computed. Maintenance personnel must be considered when determining the number of personnel the mess will feed. Here we are back where we started. This example was deliberately chosen to show some of the many ways that elements of a unit are interrelated.

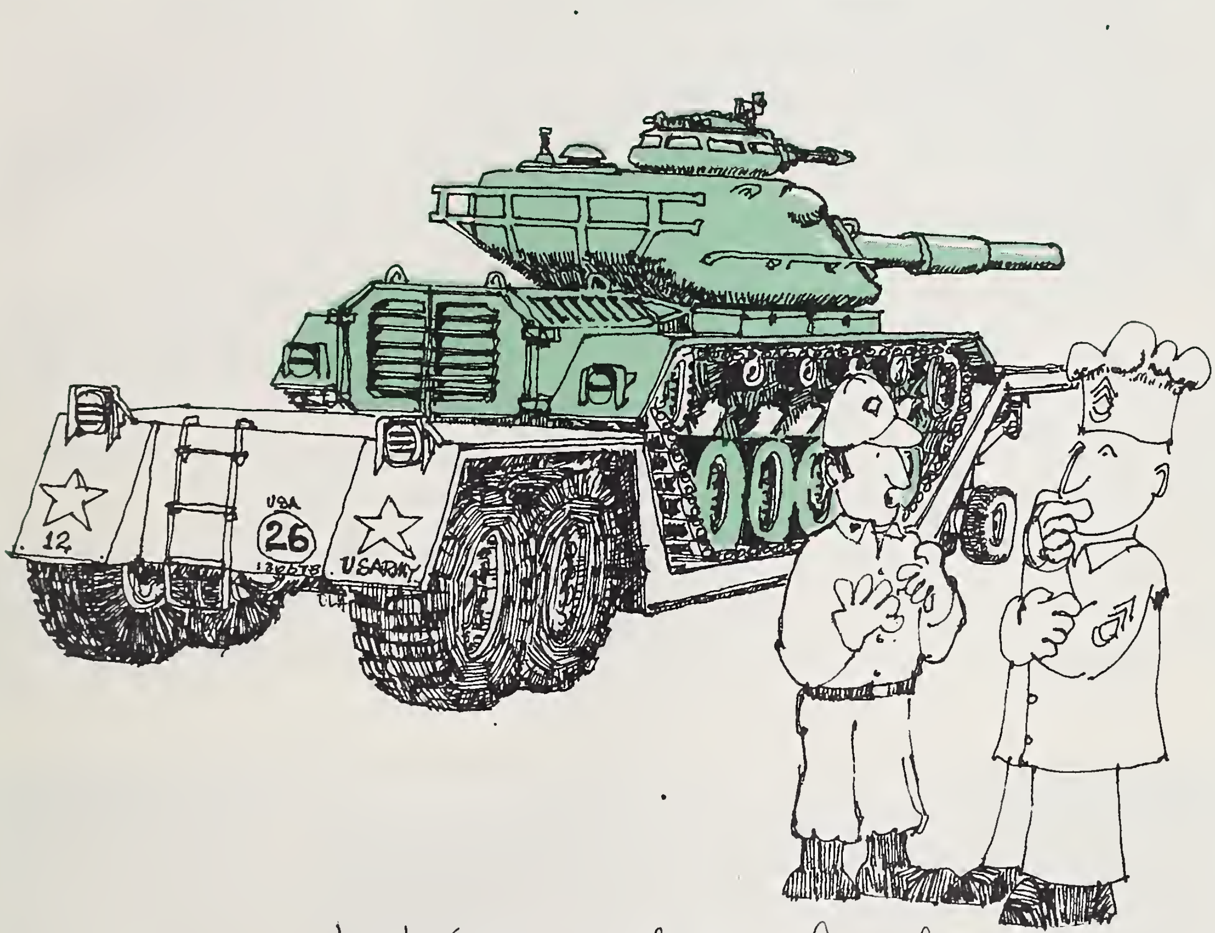
This article has outlined only the general concepts of TOE development. There is much more available in ARs of the 310 series. AR 310–31, Management System for Tables of Organization and Equipment, provides detailed policies for the TOE system. Our purpose here is to provide you with some background and then earnestly solicit your views on how to improve the TOE system.

TOE are developed for worldwide application. Your suggestion should be submitted with this in mind. Please submit your ideas directly to:

Commanding General
US Army Combat Developments
Command
ATTN: CDCDO–OE
Fort Belvoir, Virginia 22060

Our study will see how we can do a better job in meeting these requirements. We need your help since CDC represents the "user in the field"—and that's you.

A form is provided to assist you in organizing your reply, but we will be glad to receive your comments in any format. Give us as much information as you can to pinpoint the area of your recommended change. Your comments will be reviewed by people who work with TOE daily. Usually a few clues are all they need. This is the first easy opportunity for you to give your ideas directly to the TOE people. We're looking forward to hearing from you.



Look Sarge; with every four field kitchens you get a trailer with a tank on it. If you think there's a mistake, why not write CDC?

TO: Commanding General
US Army Combat Developments Command
ATTN: CDCDO–OE
Fort Belvoir, Virginia 22060

FROM:

Reference: TOE NUMBER ________ DATE PUBLISHED ____________________

TITLE ____

I recommend that the Table of Organization and Equipment indicated above be changed as follows:

*PARAGRAPH NUMBER ____________________________

*LINE NUMBER (PERSONNEL) ____________________________

*LINE ITEM NUMBER (EQUIPMENT) ____________________________

PARA TITLE ____

DESCRIPTION ____

DESCRIPTION ____

*RECOMMENDED CHANGE: ____________________________

REASON:

*If unknown, you may provide other identifying information, e.g. Para No. (Motor Pool) Line No. (Motor Sergeant) Line item (3 KW DC Gen)

NOTE:

If more than one suggestion is indicated, permission for local reproduction of the above form is happily granted.

The Forum

Dear Arrowhead,

I read with avid interest your article on Project MASSTER in the May 1971 issue but . . .

I feel more attention should be given to detail. Please note the photograph on the top of page 20. The command who has proponency for the development of flight safety gear should take every opportunity to promote its proper usage. This picture should be labeled, "What's wrong here?" The obvious lack of safety consciousness is appalling . . . no Nomex flight suit, no gloves, and chin strap not fastened. Can you find others? Maybe your readers can.

Alf G. Hansen
CPT Inf
HQ, School Bde
Ft. Rucker, Ala.

You are quite right about the pilot in the photo not meeting the SOP for flight safety. However, if you also take notice, the photo was credited to Bell Aerospace Company.

The pilot apparently is a civilian employee of the Bell Co. and thus might not observe the same safety techniques as those used by military aviators.

Secondly, you must remember that the purpose of the photo was to show the interior of the cockpit and the pilot was seated to give emphasis (he was not likely to take off the instant the picture was taken).

Thanks though for your sincere interest and keen observation. The point you made is valid and well taken.

Dear Arrowhead,

First, I would appreciate correction of my address.

Secondly, you may not be aware of the fact that the *Arrowhead* is of great interest to me and probably to all or most of the other past and present Mobilization Designees. The most interesting tours of duty of my 29-year military career were those brief weeks of reserve training with the Mobility Division of the Materiel Directorate of HQCDC. However, I find it strange that there has never been any mention of the Mob-Des program in the *Arrowhead*. I think that we who were selected as Mobilization Designees would be happy to hear what the current training programs are covering and, particularly for those of us who have been filed away in the USAR-Retired bin, how our old desk-mates are doing.

Give it a thought . . .

George H. Orloff
Lt. Col. USAR—Ret.

First, we have made the address correction as indicated. Second, no, we did not find it strange that there never had been any mention of the Mob-Des program in the *Arrowhead*, mostly because we never knew that CDC had a Mob-Des program.

However, you have opened our eyes to a brand-new area and you can count on seeing a Mob-Des story in a future issue of *Arrowhead*.

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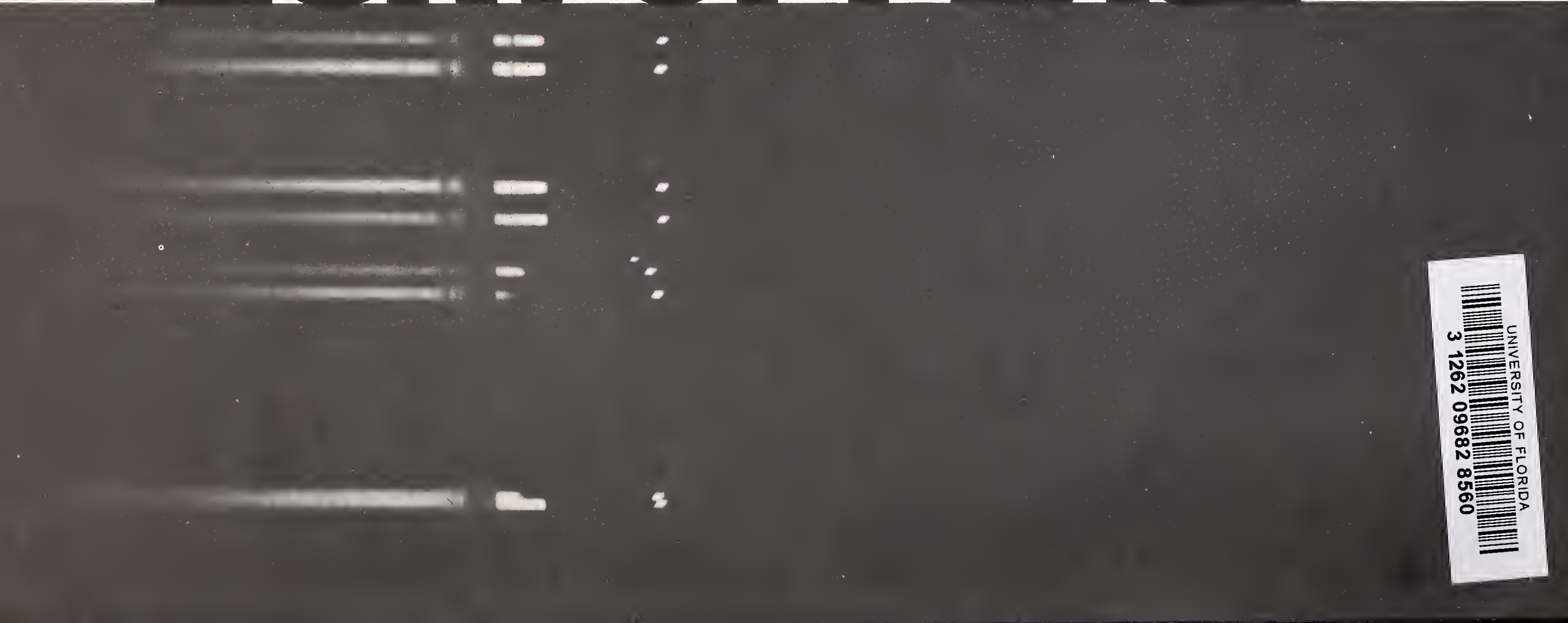
FLARE



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